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ABSTRACT

Challenges facing higher education that require both a reassertion of traditional educational values and innovative approaches to special opportunities are considered. It is suggested that research universities find ways to reestablish the traditional ties across disciplines, to ensure that research in all disciplines contributes to educational excellence and the public good. An education that emphasizes the ability to think, evaluate, and understand ethical and social issues is needed by students. Universities, and expecially research universities, must accept some of the responsibility for the current crises in precollege education since they train the teachers and set standards. Fulfilling the educational mission of turning out civic-minded, well-rounded students should be the domain of both undergraduate and graduate programs. Other issues facing research universities include: problems linked to defense-related research and industry partnerships that provide financial support; the orientation of these partnerships toward short-term results with immediate applications; and long-term research commitments made on the basis of federal funding. The changing demographics of higher education are also addressed. (SW)

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Innovation and Tradition in Higher Education

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by
John B. Slaughter

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Tenth David D. Henry Lecture

University of Illinois at Chicago
Chicago, Illinois

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The David D. Henry Lectureships in Educational Administration are endowed by gifts to the University of Illinois Foundation in recognition of Dr. Henry's contributions to the administration of higher education, including his career as president of the University of Illinois from 1955 until 1971. The lectures are intended to focus upon the study of the organization, structure, or administration of higher education, as well as its practice. Selection of persons to present the lectures is the responsibility of the chancellors of the two campuses of the University. Presentation of the lectures is alternated between Chicago and Urbana-Champaign.

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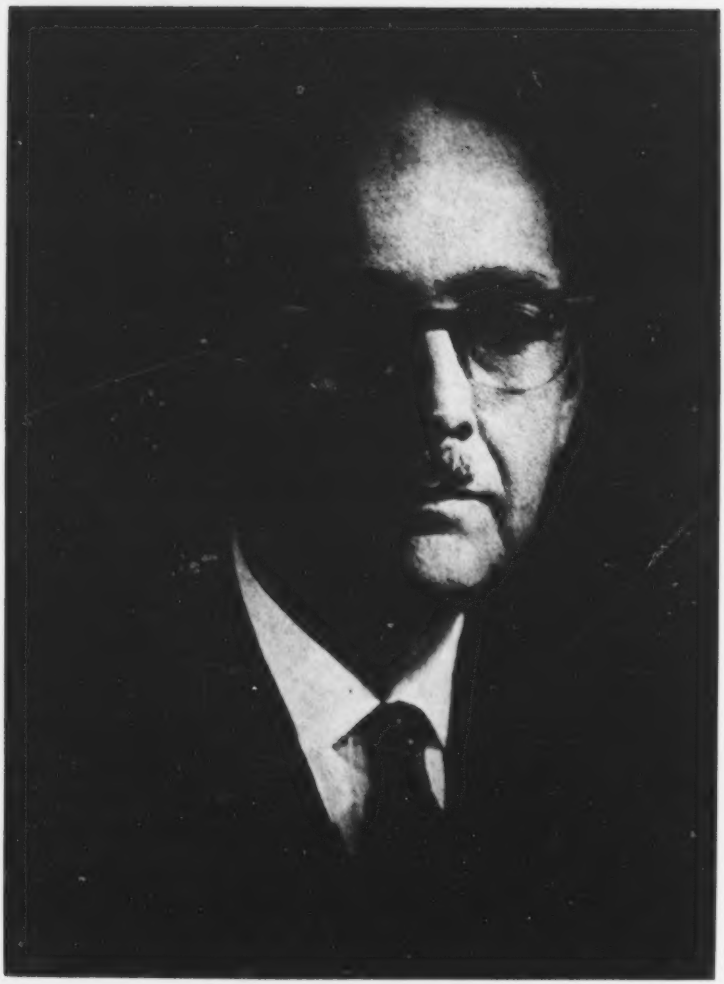

David Dodds Henry

President, University of Illinois
1955-71

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Preface

This lecture by Chancellor John Brooks Slaughter of the University of Maryland extends a series of superior contributions to the literature of higher education made possible by the David Dodds Henry Lectureship at the University of Illinois. Established by friends of the University to honor a great leader of American higher education and a great president of the University of Illinois, each lecture in the series has made a distinctive contribution. The words of John Slaughter are no exception as he comments on innovation and tradition in higher education. Following the announcement of the establishment of the lectureship, Dr. Henry commented that he hoped the lectures and publications made possible by the program would mark the University of Illinois as a center of learning in the field of higher education administration which would serve both the University and the profession. I believe Chancellor Slaughter ably meets this test.

The sixteen years of the Henry presidency at the University of Illinois were a perfect blend of innovation and tradition. His years were marked by extraordinary growth for the University and punctuated by dramatic improvements in the quality of the University's academic programs. Under his guidance, the University established a new Chicago campus and initiated a massive program expansion in the health sciences. These, the expanded strength of our libraries and international programs, and a general evolution of the breadth and depth of the University remain as legacies to Dr. Henry.

Dr. Henry was, and remains, a national spokesman for higher education. He extended the campus boundaries to include the nation and the world. He served on three national commissions and led the most influential national organizations in higher education: the American Council on Education, the Association of American Universities, the Carnegie Foundation for the Advancement of Teaching, the National Commission on Accrediting, and the National Association of State Universities and Land-Grant Colleges.

As further testimony to his stature within higher education, Dr. Henry holds twenty-nine honorary degrees, five institutional medallions, and is a member of thirteen honor societies. In 1984 the American Council on Education honored Dr. Henry with the Distinguished Service Award for Lifetime Achievement. Only seven other educators have received the award.

He has been so honored for good reason. His leadership was steady and his vision insightful during times of unparalleled change, of unprecedented turbulence, and, finally, of unmatched achievement. His imprint and influence are distinctive in the history of the University of Illinois, and the University's character and quality are distinctively better as a result.

The David D. Henry Lecture Series enriches our perspective and provides a forum from which able, academic leaders can enrich our thinking. The able, thoughtful statement by John Brooks Slaughter extends this grand tradition. The University of Illinois is pleased to offer this lecture as the tenth in a distinguished series.

Stanley O. Ikenberry
President
University of Illinois

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Introduction

It is a personal pleasure and a professional honor to introduce Dr. John Brooks Slaughter to the campus of the University of Illinois at Chicago on the occasion of the 1985 David Dodds Henry Lecture. I have known John Slaughter for many years as both friend and colleague. From 1980 through 1982, while he led the National Science Foundation as its director, I was privileged to serve as his deputy. From that position, I observed a man of wisdom, integrity, and vision — rare qualities to be sure, yet qualities which find unusual harmony in the person of today's lecturer. A distinguished scientist and engineer, John is also known for his keen sense of humor — one which often added a welcome touch of levity to his indisputable leadership in the hallowed but all-too-often humorless halls of Congress. A Renaissance spirit, John has extended his boundless intellectual curiosity and altruism to many areas of social concern, evidenced by his work as president of the Board of Directors of the San Diego Urban League, as vice-chairman of the San Diego Transit Corporation, as chair of the Governor's Task Force on Teen Pregnancy for the state of Maryland, as the state's representative to the Southern Regional Governors' Task Force on Infant Mortality, and currently, as chair of the Prince Georges County Public Schools Community Advisory Council on Magnet and Compensatory Education. It is with fond memories and great anticipation at what we are about to hear that I ask you to join me in welcoming the chancellor of the University of Maryland, College Park; the recipient of ten honorary degrees; a man whose accomplishments, if read individually, might well take up more time than his presentation; a man who shows the commitment to excellence in higher education which David Dodds Henry continues to champion; a mutual colleague and my good friend, John Brooks Slaughter.

Donald N. Langenberg
Chancellor
University of Illinois at Chicago

Innovation and Tradition in Higher Education

by John B. Slaughter
Chancellor
University of Maryland

I am deeply honored to have been invited to offer you my thoughts today in this very distinguished lecture series. It is a special pleasure to visit the University of Illinois at Chicago because of my great friendship with and great respect for your chancellor, Don Langenberg. Today I want to talk about some of the challenges before higher education — challenges that require, on the one hand, a reassertion of traditional educational values and, on the other hand, innovative approaches to special opportunities.

Within the past year we have seen a spate of major studies on higher education, particularly undergraduate education. Reports from the National Institute of Education, the National Endowment for the Humanities, the Association of American Colleges, and, most recently, from the Carnegie Foundation paint gloomy pictures of what universities and colleges across the country are offering undergraduates.

We find ourselves taking stock of our educational mission and our responsibilities at the same time that we continue to face enrollment pressures, the proliferation of educational opportunities outside of traditional educational institutions, tighter state and federal budgets, and, in the public educational sector, an increasing number of regulations that whittle away at institutional autonomy.

While it's true that we face both dilemmas and uncertainties, the situation in higher education is neither as dire nor as critical as some have characterized it. I am concerned that in dealing with our problems we become too reactive and cautious and thus fail to take advantage of new directions. I agree with my friend, Father Ted Hes-

burgh of Notre Dame, when he says that "there is no compelling reason for either panic or euphoria, that what is most certain for the next seventeen years is uncertainty." But I would hope that he is wrong in his assessment "that the expansionist era of 'full steam ahead' through clear seas to wide open horizons is now to be followed by two decades of avoiding shipwreck."

We do not want to lose our ability to marvel at the wonderful potential our institutions have as we navigate difficult waters. "Avoiding shipwreck" suggests a caution that will, at best, keep us from losing ground. It will not permit us to grow. I am reminded of the words of Oliver Wendell Holmes who said: "I find the great thing in this world is not so much where we stand, as in what direction we are moving. To reach the port of heaven, we must sail sometimes with the wind and sometimes against it, but we must sail and not drift, nor lie at anchor."

In order to navigate difficult waters and at the same time not become overly cautious, we need to consider the nature of our institutions. What is this thing we call a university? What are the characteristics that it possesses that make it so important and so highly desired by communities like Chicago and Baltimore and states like Illinois and Maryland? Let me give you one definition that underlies much of what I have to say to you today.

Universities are special places — places where intellectual curiosity and the spirit of inquiry hold forth. Universities are places of edification rather than ossification, places of clarification rather than stultification. They are places where the mind and soul are challenged with new and fresh concepts and theories waiting to be tested and applied. They are intoxicating places in which men and women of rich and diverse backgrounds challenge traditions, precedents, and past practices to explore a new and exciting realm of opportunities. They are places where the arts, the humanities, the sciences, and the professions come together in a synergistic environment which produces progress toward the development of a better world.

Traditional liberal arts education

Recent studies of higher education have been particularly critical of the decline in the traditional liberal arts core. The push toward specialization and vocationalism jeopardizes what we have historically valued in the undergraduate experience. Our high-technology society has become an excuse for abandoning requirements that are essential to our students' intellectual and social growth.

This intellectual and social growth in our students is critically important for the future of our society. Frank Newman makes this

point eloquently in his Carnegie Foundation report when he says: "The most critical demand is to restore to higher education its original purpose of preparing graduates for a life of involved, committed citizenship. It is a need which arises from the unfolding array of societal issues of enormous complexity and seriousness." Newman found that students graduating today are less civic-minded and less prepared to assume the responsibilities incumbent on a well-educated citizenry than graduates of just fifteen years ago.

No discourse on priorities in higher education in the future can be considered complete, in my opinion, until we deal with this issue. It is more important, perhaps, than many of those topics that occupy much of our concern today — industry/university cooperative research, new instrumentation in our laboratories, and computers in our classrooms. At some point, educators must come to grips with the need for students to have a greater appreciation for both Milton and molecules, Carlyle and chemistry, Marx and microcomputers, Picasso and picofarads.

We must educate our students to understand the insight of the great black scientist Percy Lavon Julian when he said of the sciences and the humanities, ". . . the goal of both is to enrich and ennoble the good life of man." And this education must come in an academic environment that encourages the exchange of ideas and not just the dissemination of information.

As Father Timothy Healy once observed, "The humanities may not be the engine that drives the ship forward." They may not be a warship's biggest gun or a clipper's most stately mast. But the humanities are our compass and our rudder. They are the gauge we use to find out where we are going. And, ultimately, they are what guide us through the seas of time and circumstance.

Let me draw an example from my own field of engineering. As our knowledge of science and technology expands almost without bounds, the five years of undergraduate education required of most engineers must include more, not less, mathematics, physics, chemistry, and metallurgy. But the expanding set of social, economic, and cultural interrelationships associated with our rush toward high technology calls for a much deeper and more professional understanding of these issues as limitations that are present in his or her designs, theories, and products. Education must come to address this reality.

Roger G. Smith, chairman of the board of General Motors, spoke of the importance of these considerations when he said that business is not so much the movement of products as it is the relationship between human beings. That view was echoed by Charles L. Brown, chairman of the board of AT&T, who said: "My own experience has shown that it is the conceptual issues and problems in business — the

humanistic concerns, if you will — that are the most difficult to deal with and the most crucial to resolve. And so there is a place — a central place — for the humanities and the liberal arts graduate in business. That's the good news. The bad news is that the good news is not better known."

Beyond the needs of the marketplace, we know that an education that stresses the ability to think, to evaluate, to understand ethical and social issues is absolutely essential in this complex world we live in. It is not enough to bang the drum for a liberal arts education because it will make our students better engineers or better business people. We have a moral imperative to nurture in our students a sense of their civic responsibilities. Twenty years ago Martin Luther King eloquently described this need for balance when he cautioned: "Our scientific power has outrun our spiritual power. We have guided missiles and misguided men . . . our hope for creative living lies in our ability to reestablish the spiritual ends of our lives in personal character and social justice." In order for the enormous advances in knowledge that we will see during this decade and in the coming ones to be used for the betterment of humankind, we must have experts who understand the social and philosophical consequences of their work.

In this era of highly specialized training, we must remind ourselves of the purpose of universities. IBM can offer continuing education in the workplace, but major corporations cannot bring together the philosopher, the physicist, the historian, and the microbiologist to offer our students and our society an understanding of the critical connections among disciplines. It is one thing for a microbiologist to understand and master the complexities involved in genetic engineering; it is quite another thing for that future researcher or teacher to grasp the profound moral implications of genetic research.

Striking a balance

In order to make these connections for our students, we must all become more invested in our educational responsibilities. Virtually every major university has a mission statement that includes research, teaching, and service. Nevertheless, at research universities, we tend to emphasize our special interests to the detriment of our common educational goals. For too long, I believe, graduate schools have held themselves aloof from educational responsibilities. They have seen themselves as research centers, as "think tanks," and as vocational training grounds for various professions. To be a member of the graduate faculty at most institutions means you teach less and do more research. You are a member of the faculty elite, and you no longer bear responsibility for the undergraduate program. Just as it has been

fashionable over the last ten years for college and university faculty to bemoan the poor quality of high school education, so, too, it is acceptable for graduate faculty to grouse about the quality of students with baccalaureates.

A few years ago, Peter Drucker pointed out the problems inherent in the relative isolation of graduate schools from the educational process. He noted that "where there are great strengths, there are also great limitations." As we all know, our graduate schools produce virtually all of the faculty who teach in all of our colleges and universities. And as the recent reports on undergraduate education remind us, we are not doing a good job of teaching those future educators how to teach and advise. We are not fostering in them a commitment to the educational values that constitute undergraduate excellence, nor are we setting an example for educators at all levels. Universities, especially research universities, must accept some of the responsibility for the current crises in precollege education. We train the teachers; we set the standards; we must be much more aggressive in making the connections. Despite recent initiatives at the state level, we are not offering precollege students enough math and science, nor are we encouraging the balanced programs students need.

Fulfilling the educational mission of turning out civic-minded, well-rounded students is not the exclusive domain of undergraduate institutions and programs. I believe our graduate programs and our research universities must shoulder their share of the responsibility. At the same time, I certainly do not believe that devotion to research is incompatible with our educational mission. As a former colleague of mine used to say: "Research is to teaching as sin is to confession. If you do not participate in the one, then you have nothing to say in the other."

Right now research universities are at a crossroads. In general, the costs of both basic and applied research exceed the universities' capacities to keep pace both in terms of instrumentation and personnel. At the same time, an increasing proportion of federal funding for research and development has been going to defense-related industry.

Research universities have turned increasingly to defense related research and to industry partnerships for support, but these ties create problems that we are just beginning to confront. Universities have a vested interest in academic freedom and the open exchange of ideas. Classified research for the Department of Defense and proposed restrictions on the sharing of "unclassified" information present formidable obstacles to the research and educational agendas of universities. A similar problem obtains with industry's desire to protect its rights to the results of research.

Another problem that is less immediate, but no less significant, is the orientation of these partnerships toward short-term results with immediate applications. It is true that application in many fields is moving closer and closer to fundamental, basic research. I think the boundaries between basic and applied research have achieved a healthy blurring in recent years. Nevertheless, universities must, in most instances, be in the business of nurturing new ideas and making the potential innovations resulting from research apparent — rather than developing the products themselves. Universities must measure partnerships that support research in terms of the common good. We must provide both leadership in setting the research agenda and technical know-how.

At the same time, universities face an important dilemma in making long-term research commitments on the basis of federal funding. In the past thirty-five years, the federal government has become the primary source of all basic research and much applied research support. Federal funding, however, has not been immune to political trends, and it is often difficult to predict the upcoming cycles in funding. Right now, for example, energy research is "out" — not because the national need in this area has abated, but because of a political decision to spend our money elsewhere. We need better long-range planning at the national level for scientific research and better coordination among the many agencies of the federal government that provide support for scientific research. The academic community has a responsibility to monitor federal funding trends and decide whether these trends serve the best interests of the nation.

Changing student populations

Finally, let me address briefly the changing demographics of higher education. If we have not had the dropoffs in enrollment that were predicted for higher education several years ago, it is because we have experienced some changes in our student populations, particularly at public institutions — changes that I believe will strengthen our universities and our society. We have more minorities, more students over the age of twenty-five, more women, more part-time students. While institutions pay lip service to the advantages of these shifts, I know that many faculty members and administrators believe deep down that while we must accommodate these new populations — even find ways to attract them — they do not represent "the best and the brightest." So while warm bodies are welcome, some meet with resistance and, on occasion, hostility as they enter the world of higher education.

I have said many times that excellence and elitism are *not* synonymous. I do not believe that institutions that stress diversity in their

student bodies abandon a commitment to excellence. In fact, I believe that the challenge of reaching out in some energetic and affirmative ways to identify, recruit, enroll, and graduate those students who in the remaining years of this century are the ones who will be knocking on higher education's door is one of the great opportunities in higher education today.

We have an opportunity to learn from these students, too. Many have life experiences that motivate them to seek the important interdisciplinary connections. Some are less intent on professional training or even on achieving specific degrees and more interested in learning for enrichment. Some come to us with great abilities but incomplete training. We must bring both flexibility and imagination to the task of developing the potential within a diverse student body.

Even if there were not the practical need to reach out to a wider student audience, higher education must heed the moral imperative to do so. We must set an example for a society that has become, at the very least, complacent if not indifferent. If our national leaders will not move forward toward equality of opportunity, we must provide the direction. I am disturbed by the fact that since 1978 black undergraduate enrollment in colleges has actually declined from 10.8 percent to 8.9 percent in 1982. In 1982, blacks accounted for only 5 percent of the enrollment at major research universities, 9.8 percent at four-year institutions, and 10.3 percent at two-year colleges.

The situation in our graduate schools is especially disturbing. Black enrollment in graduate school has declined from more than 6 percent to 4.2 percent, with Hispanics staying stable at 2.5 percent over the last five years. In 1983, out of a total of 31,190 doctorates awarded, only 1,000 went to blacks and 477 went to Hispanics. By contrast, in 1978, out of 30,850 total doctorates, blacks earned 1,100 and Hispanics earned 532. Blacks and Hispanics are seriously underrepresented in the physical and life sciences, in engineering, and in the professions. Three-quarters of all doctorates earned by blacks are in education and the social sciences. In my own field of engineering, 19 blacks earned Ph.D.s in 1979, and in 1983 the figure rose to 29. I wouldn't say we're on a roll. Finally, 60 percent of all doctoral degrees to blacks in 1980-81 were awarded by 10 percent of the institutions that offer such degrees.

We all know some of the reasons for these sorry figures. The situation arises in part because minorities are not identified, recruited, and encouraged to attend universities and colleges. It arises in part because they are less prepared and more financially dependent. We know that there are not enough blacks in higher education — not enough black administrators, not enough black faculty, not enough black graduate or undergraduate students. Only about 4 percent of all

faculty in this country are black, and the majority of those teach in traditionally black colleges. Black administrators make up less than 7 percent of the total.

Finally, we must keep in mind that while over half of our undergraduate students are women and over half of the doctorates awarded in 1983 went to women, women are not well represented on our faculties, especially in the science and engineering fields. We cannot have outstanding graduate programs until every barrier standing in the way of full and equal participation in our academic community has been toppled and replaced with an incentive. We cannot afford to wait fifty years for the underrepresented to become fully represented. We must work aggressively to redress historical injustices and inequities. We must attend to these responsibilities both through our professional commitments and programs and at a personal level, with offers of help, support, and mentoring.

Conclusion

Most of you, I am sure, are familiar with Peters and Waterman's influential book on corporate America, *In Search of Excellence*. Those authors identify eight basic principles to account for the success of our best-run companies. For me, the most compelling of these principles is one that calls for establishing a climate in which there is dedication to the central values of the company combined with tolerance for all employees who accept those values.

Higher education is in the process of taking stock, and we have an important opportunity right now to reassess our values and to offer leadership to all educational levels. To do this, we must think in the terms that Frank Newman outlines, "Policy makers must be willing to examine whether current programs and policies are achieving their educational and scholarly goals, not just whether they are meeting their financial and administrative requirements."

Research universities must find ways to reestablish the traditional ties across disciplines, to ensure that research in all disciplines is informed with a spirit of civic-mindedness and has as its end some contribution to educational excellence and the public good. As the problems we face become more complex, it is sometimes easier to isolate the small components and assume that a scientific, technical, or even literary problem can be studied outside of a larger context. One of the principal reasons for keeping research in the university is to ensure that this isolation does not happen and that we continue to make the connections for ourselves and our students.

The nationally syndicated columnist, William Raspberry, spoke at one of our recent commencements and urged our graduates not only to do well but also to do good. This simple credo is the bedrock of the values I would like to see higher education embrace. As Martin Luther King once noted, "We must use time creatively . . . and forever realize that the time is always ripe for doing right."

The David D. Henry Lectures in Higher Education

"The Administration of Higher Education in an Era of Change and Conflict," by Clark Kerr, October 1972

"Can We Maintain Quality Graduate Education in a Period of Retrenchment?" by David Riesman, April 1975

"The Administration of Education for the Health Professions: A Time for Reappraisal," by John R. Hogness, April 1976

"The Education of Administrators for Higher Education," by Harlan Cleveland, April 1977

"Socially Imposed Costs of Higher Education," by Howard R. Bowen, April 1978

"Quality and Equality in Health Professions Education and Service," by Lloyd C. Elam, April 1979

"How We Talk and How We Act: Administrative Theory and Administrative Life," by James G. March, September 1980

"The Liberal Arts Revisited," by Hanna Holborn Gray, October 1981

"The University Presidency: Comparative Reflections on Leadership," by Martin A. Trow, October 1984

"Innovation and Tradition in Higher Education," by John B. Slaughter, October 1985

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